

## REMARKS

The Office action mailed 7 February 2006, has been received and its contents carefully noted. The pending claims, claims 1-17, were rejected. Therefore, reconsideration in view of the following remarks is respectfully requested.

### Rejection under 35 U.S.C. 103(a)

Claims 1-4, 7-9, 15 and 16 were rejected under 35 U.S.C. 103(a) as being unpatentable over Lieber et al. (US 6,743,408) in view of Rueckes et al. (US 6,835,591). The Examiner pointed to column 12, lines 25-49 and Figures 8A-8D of Lieber et al. as disclosing a carbon nanotube and a nanostructure, but noted that Lieber et al. does not specify that the nanostructure is connected to the nanotube covalently. Then the Examiner deemed that it would have been obvious to modify Lieber et al. with Rueckes et al. to covalently bond nanotube films and articles on substrates because carbon nanotubes are substantially more robust having the highest known thermal conductivities and are not prone to thermal failure.

Applicants respectfully submit that the invention of Lieber et al. is a nanotweezers. Nanotweezers are used for purposes and in a manner similar to ordinary tweezers – to manipulate and probe an object. Column 12, lines 25-49, of Lieber et al. describe using the nanotweezers to manipulate and probe nanostructures. If the nanostructures were to be covalently attached to the nanotweezers (according to Rueckes et al.), the nanotweezers would become inoperable for their intended purpose. Specifically, the nanotweezers having covalently attached nanostructures, could not be used to move and manipulate the nanostructures.

Since the combination of Lieber et al. and Rueckes et al. would render the nanotweezers of Lieber et al. unsatisfactory for its intended purpose, there is no suggestion or motivation to make the proposed modification in order to obtain the claimed invention – a heterojunction comprising at least one nanostructure covalently attached to at least one carbon nanotube. *See In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Therefore, a prima facie case of obviousness cannot be established and the rejection under 35 U.S.C. 103(a) should properly be withdrawn.

The Examiner rejected claims 5 and 6 under 35 U.S.C. 103(a) as being unpatentable over Lieber et al. and Rueckes et al. in view of Andriessen (US 6,977,390). The Examiner also rejected claims 10-14 under 35 U.S.C. 103(a) as being unpatentable over Lieber et al. and Rueckes et al. in view of Wong et al.

Applicants respectfully submit that neither Andriessen nor Wong et al. alleviate the deficiencies of Lieber et al. and Rueckes et al. Specifically, none of the cited prior art, alone or in combination, teach or suggest a heterojunction comprising at least one nanostructure covalently attached to at least one carbon nanotube.

Therefore, a prima facie case of obviousness has not be established and the rejection under 35 U.S.C. 103(a) should properly be withdrawn.

#### **Request for Interview**

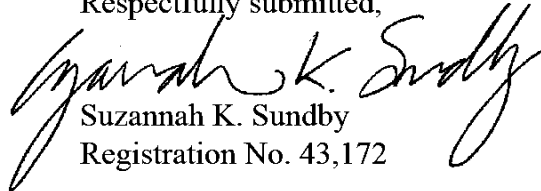
Applicants respectfully request either a telephonic or an in-person interview should there be any remaining issues. Since the Applicants representative attempted to arrange an interview numerous times without success, Applicants would greatly appreciate the Examiner contacting the undersigned to discuss any outstanding issues prior to issuing an Advisory action, if any.

### CONCLUSION

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

It is not believed that extensions of time are required, beyond those that may otherwise be provided for in accompanying documents. However, in the event that additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. §1.136(a), and any fees required therefor are hereby authorized to be charged to **Deposit Account No. 02-4300**, Attorney Docket No. **034044.025 (2003-015-2)**.

Respectfully submitted,

  
Suzannah K. Sundby  
Registration No. 43,172

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SMITH, GAMBRELL & RUSSELL, LLP  
1850 M Street, N.W., Suite 800  
Washington, D.C. 20036  
Telephone: (202) 263-4332  
Fax: (202) 263-4352  
ssundby@sgrlaw.com